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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,550	08/05/2003	Yuuki Tauchi	241154US0	6442

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314		

EXAMINER	
MORILLO, JANEL COMBS	

ART UNIT	PAPER NUMBER
1742	

NOTIFICATION DATE	DELIVERY MODE
08/07/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/633,550	Applicant(s) TAUCHI ET AL.	
	Examiner Janelle Combs-Morillo	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36,39-41,43-46,49,50,53,57,58 and 60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36,39-41,43-46,49,50,53,57,58 and 60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The indicated allowability of claims 52-58 and 60 is withdrawn in view of the references to JP2001-184725A and JP 52-013688A. Rejections based on said references follows.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 36, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP2001-184725A (JP'725).

JP'725 teaches an optical recording medium, said medium with a reflective silver alloy layer adhered to the substrate material (see translation at [0004]). Said silver alloy contains 0.5-5% total of one or more alloying elements, wherein one of said elements can be Bi, Cu, Au, Pt (abstract), wherein 0.5% is a close approximation of the presently claimed 0.4%. Because of said close approximation of the reflective layer taught by JP'725, it is held that JP'725 has created a prima facie case of obviousness of the presently claimed invention.

Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05. It would have been obvious to one of ordinary skill in the art to select any portion of the range, including the claimed range, from the broader range disclosed in the prior art, because the prior art finds that said composition in the entire disclosed range has a suitable utility. A prima

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facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of “having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium” as obvious over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.).

4. Claims 40-41, 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP’725 in view of Nee’603 (US 2002/0034603A1) or Worthington (US 2005/0018583A1).

JP’725 is discussed in paragraphs above.

JP’725 does not teach the first reflective Ag-Bi layer is a semi-transmissive film with a second layer on said substrate of a reflective Ag-Bi alloy.

However, Nee’603 teaches that similar silver alloys can be used as reflective and semi-reflective layers (see [0054]), and an optical recording medium structure with a partially reflective thin film layer as a first layer directly on the substrate (see Fig. 4, [0046]), as well as a second highly reflective film/coating. Nee’603 teaches that silver alloys can be provided with moderate to high reflectivity, and have good corrosion resistance (abstract). It would have been obvious to one of ordinary skill in the art to use the silver alloy taught by JP’725 as a reflective and semi-reflective layers in a optical information recording medium structure taught by Nee’603 because Nee’603 teaches that silver alloys can be provided with moderate to high reflectivity, have good corrosion resistance, and are well suited for highly reflective and semi-reflective layers of optical disks (abstract).

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Alternatively, Worthington teaches that optical disks may include a structure with a semi-reflective/partly transmissive layer of suitable silver or silver alloy, and the surface may be coated with another reflective layer. The reflectivity is selected in order to obviate readjustment of gain control when the disc reader switches it's reading between layers [0079]. It would have been obvious to one of ordinary skill in the art to use the silver alloy taught by JP'725 as a reflective and semi-reflective layers in a optical information recording medium structure taught by Worthington, because Worthington teaches an operational recording medium structure with said layers is beneficial to obviate readjustment of gain control when the disc reader switches it's reading between layers [0079].

5. Claims 43-46, 49, 50, 57, 58, 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'725 and (Nee'603 or Worthington) in view of [Fuji et al (US 7,022,384) or JP 52-013688 (JP'688) or Nakai (US 6,689,444) or JP 2002-237097A (JP'097)].

JP'725, Nee'603, and Worthington are discussed in paragraphs above.

The prior art of JP'725, Nee'603, and Worthington do not mention the addition of a rare earth element (in particular, Nd) to said silver optical recording medium alloy. However, the prior art teaches that rare earth elements can be added to silver alloys in order to improve wear resistance/durability (JP'097 at abstract, JP'688 at abstract, Fuji at abstract, column 1 line 14, Nakai at abstract).

Fuji and Nakai also teaches that RE elements such as 0.1-3.0at% Nd suppress grain growth and decrease reflectivity losses over time (Fuji at column 3 lines 35-38, 50-51; Nakai at Fig. 15, 16).

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It would have been obvious to one of ordinary skill in the art to a RE element/Nd to the Ag-Bi alloy taught by JP'725, because the prior art teaches said addition improves wear resistance/durability (JP'097 at abstract, JP'688 at abstract, Fuji at abstract, column 1 line 14, Nakai at abstract) or because Fuji and Nakai teaches that 0.1-3.0at% Nd suppresses grain growth and decreases reflectivity losses over time (Fuji at column 3 lines 35-38, 50-51; Nakai at Fig. 15, 16).

****The applied references of Fuji and Nakai have a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).**

6. Claims 43-46, 49, 50, 57, 58, 60 are rejected under 35 U.S.C. 103(a) as being unpatentable JP 52-013688 (JP'688) in view of Nee'603 (US 2002/0034603A1) or Worthington (US 2005/0018583A1).

JP'688 and JP'725 are discussed in paragraphs above. JP'688 teaches an alloy consisting of 0.1-3% Bi 0.2-4% RE, balance Ag, which significantly overlaps the presently claimed alloying ranges of claims 43-46, 49, 50, 57, 58, 60.

JP'688 does not teach the first reflective Ag-Bi layer is a semi-transmissive film with a second layer on said substrate of a reflective Ag-Bi alloy.

However, Nee'603 teaches that similar silver alloys can be used as reflective and semi-reflective layers (see [0054]), and an optical recording medium structure with a partially reflective thin film layer as a first layer directly on the substrate (see Fig. 4, [0046]), as well as a second highly reflective film/coating. Nee'603 teaches that silver alloys can be provided with moderate to high reflectivity, and have good corrosion resistance (abstract). It would have been obvious to one of ordinary skill in the art to use the silver alloy taught by JP'688 as a reflective and semi-reflective layers in a optical information recording medium structure taught by Nee'603 because Nee'603 teaches that silver alloys can be provided with moderate to high reflectivity, have good corrosion resistance, and are well suited for highly reflective and semi-reflective layers of optical disks (abstract).

Alternatively, Worthington teaches that optical disks may include a structure with a semi-reflective/partly transmissive layer of suitable silver or silver alloy, and the surface may be coated with another reflective layer. The reflectivity is selected in order to obviate readjustment of gain control when the disc reader switches it's reading between layers [0079]. It would have been obvious to one of ordinary skill in the art to use the silver alloy taught by JP'688 as a reflective and semi-reflective layers in a optical information recording medium structure taught by Worthington, because Worthington teaches an operational recording medium structure with

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said layers is beneficial to obviate readjustment of gain control when the disc reader switches it's reading between layers [0079].

Double Patenting

7. The terminal disclaimer filed on January 29, 2007 has been found proper and is hereby recorded (concerning 11/158079, 11/168497, 11/103615, 11/425062, 11/425068, 11/428045, 11/375036, 11/395227, 11/401853). The terminal disclaimer filed on May 18, 2007 has been found proper and is hereby recorded (concerning 10/999027, 11/313815, US Pat.7,203,003)

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Copending Application No. 10/844345

9. Claims 36, 39-41, 43-46, 49, 50, 53, 57, 58, 60 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of

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compending Application No. 10/844345 (US'345) in view of Nee'603. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of US'345 are also drawn to a Ag alloy sputtering target, said Ag alloy comprising 0-3at% Bi, and optionally $\leq 5\text{at\% Nd}$ (see '345 at cl. 7, 12, 13), which overlaps the claimed composition.

It would have been obvious to one of ordinary skill in the art to use the silver alloy taught by the claims of US'345 as a reflective and semi-reflective layers in a optical information recording medium structure taught by Nee'603 because Nee'603 teaches that silver alloys can be provided with moderate to high reflectivity, have good corrosion resistance, and are well suited for highly reflective and semi-reflective layers of optical disks (abstract).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Claims 36, 39-41, 43-46, 49, 50, 53, 57, 58, 60 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 42-63 of compending Application No. 11/353168 (US'168). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of US'168 are also drawn to a Ag alloy optical information recording medium for semi transmissive film, said Ag alloy comprising 0.05-4.5at% Bi, and optionally 0.1-2.0at% Nd (see US'168 at cl. 6, 14), which overlaps the claimed composition.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Amendment/Arguments

11. In the response filed on May 18, 2007 applicant amended claims 36, 43, 44, 50, and 58. The examiner agrees that no new matter has been added.

12. Applicant's argument that the present invention is allowable over the prior art of record because the prior art does not teach or suggest an optical information recording medium comprising a silver alloy with the instant range of Bi has not been found persuasive. As stated in the rejections above, JP'725 teaches a alloy composition that is a close approximation of the presently claimed range of Bi.

13. When the Examiner has established a *prima facie* obviousness, the burden then shifts to the applicant to rebut. *In re Dillon*, 919 F.2d 688, 692, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990) (en banc). Rebuttal may take the form of "a comparison of test data showing that the claimed compositions possess unexpectedly improved properties... that the prior art does not have, that the prior art is so deficient that there is no motivation to make what might otherwise appear to be obvious changes, or any other argument.. that is pertinent." *Id.* at 692-93; USPQ2d 1901.

Applicant has not clearly shown specific unexpected results with respect to the prior art of record or criticality of the instant claimed range (wherein said results must be fully commensurate in scope with the instantly claimed ranges, etc. see MPEP 716.02 d).

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Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs-Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 8:30 am- 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCM
July 31, 2007

ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700